8.2 Biological Resources

The Henrietta Peaker Project (HPP) consists of a 91.4-megawatt (MW) (net), natural-gas-fired, simple-cycle power plant located approximately 10 miles southwest of Lemoore, California, on a seven-acre portion of a 20-acre parcel owned by GWF Energy LLC. The HPP will interconnect to the existing adjacent Pacific Gas and Electric Company (PG&E) Henrietta Substation through a new 550-foot 70-kilovolt (kV) transmission line supported on two new transmission poles. Other linear facilities include an approximately 16.5-foot water interconnection pipeline (from the site property boundary) and a 2.2-mile Southern California Gas Company natural gas interconnection pipeline. Additionally, approximately five acres will be used for temporary construction laydown and parking.

8.2.1 Affected Environment

8.2.1.1 Regional Setting

The HPP site is located in the central San Joaquin Valley, one mile south of Naval Air Station (NAS) Lemoore in California (Figure 8.2-1). The region's climate can be characterized as Mediterranean, with hot, dry summers and cool, moist winters. Summer high temperatures typically exceed 100 degrees Fahrenheit (°F), with an average of 110 days per year over 90 °F. Winter temperatures in the San Joaquin Valley are mild, with an average of 16 days per year with frost (Twisselmann, 1967).

Rainfall in the Central Valley averages 7 to 8 inches per year. Winter fog, called "tule fog," sometimes forms during the months of November, December, and January, supplementing the annual precipitation. On average, approximately 90 percent of the rainfall occurs between November 1 and April 1 (Twisselmann, 1967). The region periodically experiences drought cycles, the most recent of which occurred during the mid and late 1980s.

8.2.1.2 Vegetation

The HPP site is dominated by intensively managed agricultural activities. Natural vegetation is restricted to the farm equipment storage area just north of the plant site and to the

banks of agricultural drainage sumps and canals. All of these areas are disturbed on a regular basis, and plants are predominantly weedy and exotic.

8.2.1.3 Wildlife

General Wildlife. The ruderal vegetation near the project site could provide marginal habitat for a variety of birds, mammals, and reptiles. Bird species include the red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus*), burrowing owl (*Athene cunicularia*), and western meadowlark (*Sturnella neglecta*). Mammals occupying this habitat type include the black-tailed hare (*Lepus californicus*), desert cottontail (*sylvilagus audubonii*), kangaroo rat (*Dipodomys* spp.), deer mouse (*Peromyscus maniculatus*), kit fox (*Vulpes macrotis*), coyote (*Canis latrans*), bobcat (*Felis rufus*), and American badger (*Taxidae taxus*). Amphibians and reptiles include the western toad (*Bufo boreus*), side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus Tigris*), and gopher snake (*Pituophis melanoleucus*).

Economically Important Species. One gamebird species, the mourning dove (*Zenaida macroura*), potentially occurs at the proposed HPP site. This species has some recreational value to hunters, but has no important economic value. No species of economic importance occur in the HPP area.

Biologically Sensitive Areas. The HPP lies outside any biologically sensitive area.

8.2.1.4 Sensitive Species

Lists of special-status wildlife and plant species known to occur or to potentially occur in the vicinity of the HPP site are shown in Table 8.2-1. These species were identified based on a search of the California Natural Diversity Database, unpublished biological reports produced for other projects in the area of the HPP, and staff experience and knowledge of sensitive flora and fauna of the central San Joaquin Valley.

8.2.2 Biological Survey

8.2.2.1 Survey Methodology

Surveys at the HPP site were conducted by William J. Vanherweg and Christine O'Rourke on April 20 and May 22, 2001. The surveys were conducted primarily for listed plant and animal species, following methodologies approved by the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) (CDFG, 1990). Surveys were performed concurrently for other special-status plant and wildlife species with potential to occur in the area. This section provides a discussion of the survey methodology used during the field review of the project site and the natural gas pipeline and transmission line corridors.

The HPP site and natural gas pipeline and transmission line corridors were surveyed by walking 50-foot-wide transects in suitable species habitat. An additional buffer zone (1,000 feet on either side of the corridors and around the facility) was also surveyed (Figure 8.2-2). During the survey, all dens, burrows, and other evidence of special-status species were noted. A list was compiled of all animal and vascular plant species observed (see Table 8.2-2). San Joaquin kit fox potential and known dens, kangaroo rat burrows, burrowing owl burrows, and locations of other sensitive species were marked in the field with terminal wire pin flags and mapped on a site map. Suitable blunt-nosed leopard lizard habitat was also noted and mapped on a site map.

The San Joaquin kit fox dens were classified according to the following USFWS kit fox den definitions (USFWS, 1989):

- *Known Den:* Any existing natural den or man-made structure for which conclusive evidence or strong circumstantial evidence can show that the den is used or has been used at any time in the past by a San Joaquin kit fox.
- *Potential Den:* Any natural den or burrow within the range of the species that has entrances of appropriate dimensions (4 to 12 inches in diameter) to accommodate San Joaquin kit foxes, but for which there is little to no evidence of kit fox use.
- *Pupping Den:* Any known San Joaquin kit fox den (as defined above) used by kit foxes to whelp and/or rear their pups.

- *Atypical Den:* Any known San Joaquin kit fox den that has been established in, or in association with, a man-made structure.

8.2.2.2 Results

The proposed HPP site is currently being managed as intensive agricultural land and has no habitat features that would be of value to any sensitive species. There are no sensitive wildlife or plant resources at the site. The agricultural equipment storage area just north has some potential for San Joaquin kit fox foraging and denning, although no dens were observed at the time of the survey (Figure 8.2-3).

The natural gas pipeline corridor follows the margins of intensively managed agricultural fields and paved county road right-of-ways. No other sensitive wildlife or plant resources were found in the corridor or within 1,000 feet of the route (Figure 8.2-4).

The transmission line corridor traverses the equipment storage area north of the plant site and offers some foraging and denning potential for San Joaquin kit foxes and burrowing owls, though no potential or known kit fox dens or burrowing owl burrows were observed during the survey. No other sensitive wildlife or plant resources were found in the corridor or within 1,000 feet of the route (Figure 8.2-4).

California Natural Diversity Database field survey report sheets were not completed for this project, because no sensitive wildlife or plants were observed.

8.2.3 Environmental Consequences

8.2.3.1 Construction Phase

The project will result in the permanent loss of approximately seven acres of intensely managed farmland. The USFWS has required incidental take permits and habitat compensation to mitigate the loss of these types of habitats, because San Joaquin kit foxes have been observed using farmland for denning and foraging.

8.2.3.2 Operations and Maintenance Phase

No adverse environmental consequences are associated with the operations and maintenance phase of the HPP.

8.2.4 Growth-Inducing Impacts

The HPP site is located in unincorporated Kings County adjacent to an existing electrical substation. Conversion of agricultural lands to nonagricultural use will be minimal and will be limited to the seven-acre HPP site. Collectively, these activities could indicate a trend toward energy-related uses in this part of Kings County. Increased industrial activity in the vicinity of the HPP may increase the possibility that lands under agricultural production will be converted to nonagricultural uses. However, the specific characteristics of individual projects are not known and should be considered speculative. Additionally, such projects would undergo appropriate environmental review at the time their applications were submitted.

8.2.5 Cumulative Impacts

The proposed HPP will not cause a significant change in the character of the region when considered in conjunction with similar, planned projects (see Section 8.4, Land Use). The proposed HPP will impact land use in its vicinity by increasing the concentration of industrial activity. However, it will not result in changes to existing land use patterns and is fully consistent with existing zoning. The previously approved Hanford Energy Park Peaker project is located approximately 15 miles away. Both the Hanford Energy Park Peaker project and the proposed HPP are low-impact projects. No other energy-related projects are planned or proposed in the vicinity of the HPP. Direct impacts associated with the HPP are extremely minimal, and no significant cumulative impacts on biological resources are expected to occur. As a result, the cumulative land use impacts are considered insignificant.

8.2.6 Mitigation Measures

Preconstruction biological surveys will be undertaken at least 30 days before the start of construction activity for the plant site, the electric transmission line, and the natural gas pipeline. If San Joaquin kit foxes, burrowing owls, or nesting raptors are found in or near the

corridors during these surveys, additional mitigation measures may be necessary to comply with LORS. Lost habitat will be replaced according to appropriate ratios (see Appendix K).

8.2.7 Applicable Laws, Ordinances, Regulations, and Standards

This section lists the laws, ordinances, regulations, and standards (LORS) related to biological resources that potentially apply to the proposed HPP. Additional information concerning compliance with LORS is included in Table 8.2-3.

Federal Endangered Species Act: The project must demonstrate compliance with the Endangered Species Act of 1973 (as amended) because it is located within habitat areas determined to be currently or historically occupied by the endangered San Joaquin kit fox (*Vulpes macrotis mutica*), the blunt-nosed leopard lizard (*Gambelia sila*), and Tipton kangaroo rat (*Dipodomys nitratoides nitratoides).*

Migratory Bird Treaty Act: Title 16, United States Code, Sections 703–712, prohibits take of migratory birds, including nests with viable eggs.

Clean Water Act: The U.S. Army Corps of Engineers (USACE), under Section 404 of the Clean Water Act, regulates discharges of dredged or fill material in "waters of the United States". The term "waters" includes wetlands and nonwetland bodies of water that meet specific criteria, as defined in the Code of Federal Regulations. The definition of waters of the United States includes "...intrastate lakes, rivers, streams (including intermittent streams)...the use, degradation or destruction of which could affect interstate or foreign commerce..." and tributaries defined as waters of the United States.

Some intermittent washes may qualify as waters of the United States. Areas that meet the definition of waters of the United States or the definition of wetlands would be under USACE jurisdiction. Any impacts in these areas could require a permit, depending on the type and size of the activity within USACE jurisdiction.

California Environmental Quality Act: The effects of the project on environmental resources must be analyzed and assessed as to their significance using criteria

provided in various sections and appendices of the CEQA. Preparation for this Application of Certification fulfills CEQA requirements.

California Endangered Species Act: Compliance with the California Endangered Species Act is required because the project area is within habitats currently or historically occupied by the state-threatened San Joaquin kit fox and the endangered Fresno kangaroo rat and blunt-nosed leopard lizard. If field assessments indicate a likelihood of "take" of these species, consultation with the CDFG under Fish and Game Code Sections 2050 and 2091 is required.

Fish and Game Code Section 1600 et seq: Any activity that will divert or obstruct the natural flow or change the bed, bank, or channel of any river, stream, or lake must provide a Streambed Alteration Notification to the CDFG. A Streambed Alteration Notification is also required if streambed material is proposed for removal. A Streambed Alteration Notification may result in a Streambed Alteration Agreement between the project applicant and the CDFG. The CDFG should be notified of any project construction in intermittent streams so that the agency can determine whether or not a Streambed Alteration Agreement is necessary.

Fish and Game Code Section 3503: This section protects California's birds by making it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird.

Fish and Game Code Section 3503.5: This section protects California's birds of prey and their eggs by making it unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird.

Fish and Game Code Section 3513: This section protects California's migratory birds by making it unlawful to take or possess any migratory nongame bird, as designated in the Migratory Bird Treaty Act, or any part of such migratory nongame bird.

Fish and Game Code Sections 3511, 4700, 5050, and 5515: These sections prohibit take of animals that are classified as fully protected in California.

Fish and Game Code Sections 1900 et seq: These sections designate state rare, threatened, and endangered plants.

Title 14, California Code of Regulations, Sections 670.2 and 670.5: These sections list animals of California designated as threatened or endangered.

8.2.8 Compliance with Applicable LORS

8.2.8.1 Federal Endangered Species Act

The HPP requires a Section 10 consultation with USFWS. It is anticipated that USFWS would require incidental take permits and habitat compensation to mitigate for the loss of habitat. A draft Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) has been prepared that includes initial estimates of these mitigation requirements. USFWS will review and approve a final BRMIMP as part of the Section 10 consultation. The HPP is eligible to be covered under the Kern Water Bank Master Incidental Take Permit. HPP will participate in the Kern Water Bank Habitat Conservation Plan (HCP) through an agreed-upon payment to the Kern Water Bank to secure the appropriate compensation acreage.

8.2.8.2 Migratory Bird Treaty Act

The HPP BRMIMP will include measures to reduce any potential impacts to migratory birds to less-than-significant levels.

8.2.8.3 Clean Water Act

No intermittent streams, jurisdictional wetlands, or other "waters of the United States" would be impacted by the project. Therefore, no further action is needed to comply with the Clean Water Act.

8.2.8.4 California Environmental Quality Act

Preparation of this AFC and the subsequent review and licensing by the CEC will conform with CEQA requirements.

8.2.8.5 California Endangered Species Act

There is little or no chance for take of California-listed species. Thus, no CDFG Section 2081 permit will be required.

8.2.8.6 Fish and Game Code

No streams or streambeds would be impacted by the HPP. Therefore, no Streambed Alteration Agreement is required. In addition, a BRMIMP will be prepared to ensure there are no significant impacts.

8.2.9 Proposed Conditions of Certification

Proposed conditions of certification are included in Appendix K. Incorporation of these conditions will ensure that the HPP complies with all applicable LORS and will not result in significant impacts to biological resources.

8.2.10 Applicable Permits

The Hanford Energy Park Peaker project recently qualified to be covered under the Kern Water Bank Master Incidental Take Permit to mitigate permanent disturbance to agricultural lands. The HPP is almost identical in scope and geographic location to the Hanford project, and coverage under the Kern Water Bank permit should apply. No CDFG 2081 permit is necessary because there is little or no chance for take of individual listed animals.

8.2.11 Other Required Permits/Approvals

The following provides a list of other permits or approvals required:

Permit/Approval	Responsible Agency	Schedule
Section 10 Endangered Species Act Compliance	Kings County, USFWS	October 31, 2001

8.2.12 Agency Contacts

Agency	Contact/Title	Telephone
Kings County	William R. Zumwalt Director Kings County Planning Department 1400 W. Lacey Blvd. Hanford, CA 93230	(559) 582-3211

Agency	Contact/Title	Telephone
U.S. Fish and Wildlife Service	Peter Cross 2800 Cottage Way, W-2605 Sacramento, CA 95825	(916) 441-6655
California Department of Fish Game, Region 4	Bill Loudermilk, Regional Manager 1234 E. Shaw Avenue Fresno, CA 93710	(559) 243-4005

8.2.13 References

California Department of Fish and Game (CDFG), 1990. CDFG Region 4 Survey Methodologies for San Joaquin Kit Fox, Blunt-Nosed Leopard Lizard, San Joaquin Antelope Squirrel, Tipton Kangaroo Rat, and Giant Kangaroo Rat. Compiled by R. Rempel and G. Presley.

Twisselman, E. C., 1967. "A Flora of Kern County, California." Wasmann J. Biol. 24:1–395.

U.S. Fish and Wildlife Service (USFWS), 1989. Endangered and Threatened Wildlife and Plants. U.S. Government Printing Office: 1989-0-225-765:QL3.

TABLES

Table 8.2-1
Special-Status Species with Potential to Occur in the Vicinity of the HPP Site

Species	Status Federal/State/ CNPS	Habitat
Branchinecta longiantenna Longhorn fairy shrimp	-/E/-	Intermittent wetlands, vernal pools
Branchinecta lynchi Vernal pool fairy shrimp	-/E/-	Intermittent wetlands, vernal pools
Lepidurus packardi Vernal pool tadpole shrimp	-/T/-	Intermittent wetlands, vernal pools
Ambystoma californiense California tiger salamander	-/CSC/-	Intermittent wetlands, vernal pools
Gambelia sila Blunt-nosed leopard lizard	E/E/-	Open saltbush scrub and grassland habitats, roads, and open washes
Athene cunicularia Burrowing owl	-/CSC/-	Valley grasslands and open saltbush scrub
Lanius ludovicianus Loggerhead shrike	-/CSC/-	Valley grasslands and saltbush scrub
Buteo swainsoni Swainson's hawk	-/T/-	Open grassland or cropland with scattered trees
Dipodomys nitratoides nitratoides Tipton kangaroo rat	E/E/-	Western and southern side of the San Joaquin Valley, saltbush scrub, and other alluvial plain and low foothill habitats
Onychomys torridus tularensis Tulare grasshopper mouse	-/CSC/-	Scrub and grassland habitats on the west side of the San Joaquin Valley
Perognathus inornatus San Joaquin pocket mouse	-/CSC/-	Open habitats in the San Joaquin Valley
Taxidae taxus American badger	-/CSC/-	Grassland and scrub habitats of the San Joaquin Valley and surrounding foothills
Vulpes macrotis mutica San Joaquin kit fox	E/T/-	Grassland and scrub habitats of the San Joaquin Valley and surrounding foothills
Cirsium crassicaule Slough thistle	FSC/-/1B	Wet areas
Delphinium recurvatum Recurved larkspur	FSC/CSC/1B	Alkali sink, frequently with spiny saltbush
Caulanthus californicus California jewelflower	E/-/4	Open, sparsely vegetated areas in saltbush scrub and grassland

E = Endangered
T = Threatened
FSC = Federal Species of Concern
CSC = California Species of Concern
CNPS = California Native Plant Society
1B = Rare or endangered in California and elsewhere
4 = Plants of limited distribution

Table 8.2-2
Vascular Plants and Wildlife Observed During Biological Surveys

Common Name	Scientific Name
Alkali weed	*Cressa truxillensis*
Tumbling oracle	*Atriplex rosea*
Bull thistle	*Cirsium vulgare*
Cheese weed	*Malva parviflora*
Wire lettuce	*Stephanomeria pauciflora*
Common groundsel	*Senecio vulgaris*
Pepper grass	*Lepidium nitidum*
Jackass clover	*Wislizenia refracta*
Filaree	*Erodium cicutarium*
Rancher's fireweed	*Amsinckia menziesii* var. *intermedia*
Field mustard	*Brassica rapa*
Low Barley	*Hordeum depressum*
Salt grass	*Distichilis spicata*
Italian rye grass	*Lolium multiflorum*
Canary grass	*Phalaris minor*
Eucalyptus	*Eucalyptus sp.*
Western kingbird	*Tyrannus verticalis*
Red-winged black bird	*Agelaius phoeniceus*

Table 8.2-3
HPP Summary of LORS and Compliance

Jurisdiction	Authority	Administering Agency	AFC Conformance Section
Federal	Endangered Species Act of 1973; 16 USC § 1531 et seq.; 50 CFR Parts 17 and 222	USFWS	8.2.8
State	California Endangered Species Act of 1984; California Fish & Game Code §§ 2050–2091, 1603	CDFG	8.2.8
State	California Environmental Quality Act: California Public Resources Code § 21000 et seq.	CEC	8.2.8

FIGURES